

**REMARKS**

**I. Formal Matters**

The Examiner has rejected pending claims 23-28 and 31-39, and has withdrawn claims 40-50 from consideration. In this Amendment, Applicants have amended claims 23, 34, and 35 and cancelled claims 31 and 36-50. Support for the amendments to the claims may be found as follows:

Claim	Support
23	page 23, lines 12-30; Figures 3E-3F
34	page 23, lines 12-30; Figures 3E-3F
35	page 23, lines 12-30; Figures 3E-3F

Applicants wish to thank the Examiner for kindly discussing the proposed amended claims with the undersigned representative.

**II. Written Description Rejection**

The Examiner has rejected claims 23-28 and 31-39 under 35 U.S.C. § 112, first paragraph, as allegedly lacking written description. The Examiner argues that the original application does not provide adequate support for the broadly claimed genus of immunogenic polypeptide fragments comprising HIV-1<sub>MAL</sub> epitopes of 5-150 amino acid residues, wherein at least one amino acid residue is substituted at one of the specific positions.

The Examiner provides three reasons for his conclusion. First, he argues that the disclosure fails to identify any specific HIV-1<sub>MAL</sub> immunogenic fragments of the claimed lengths and substitutions. Second, the Examiner argues that the disclosure

fails to perform any type of comparison, wherein specific immunogenic fragments from isolate MAL are identified and acceptable amino acid substitutions are performed.

Third, the Examiner alleges that the disclosure fails to provide adequate support for MAL-specific polypeptides of the recited lengths. The Examiner disagrees with Applicants' argument that Figures 3E-F provide support for the claimed invention.

Applicants have previously presented arguments against this rejection and have also provided the Declaration of Dr. Marie-Lise Gougeon in support of these arguments. While Applicants maintain all of the prior arguments, Applicants have amended the claims in accordance with the Examiner's suggestions. First, the claims have been amended to require particular amino acids from conserved sequences. Claim 23 has been amended to recite that the HIV-1 Env peptide comprises amino acids from the following conserved sequences: positions 37-130, 211-289, 488-530, 490-620, and 680-700 of Env as shown in Figures 3E-3F. Claim 34 has been amended to recite that the peptide comprises amino acids 34-530 as shown in Figures 3E-3F. Second, the claims have also been amended to recite that the amino acid substitutions are from the same position in the other sequences in Figure 3 (the LAV<sub>BRU</sub>, LAV<sub>ARV2</sub>, and LAV<sub>ELI</sub> sequences).

Both of these new limitations provide significantly more structural information on the claimed HIV-1 Env peptides and, likewise, provide links between the structure of the peptides and the claimed function of being immunogenic and also binding to antibodies in AIDS patient sera.

**III. Conclusion**

Applicants request that the Examiner reconsider the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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